

## ABSTRACT

An object of the present invention is to provide a new method for producing a fine metal powder, in which high purity fine metal powders which are more minute than ever before, are uniform in particle diameter, and contain no impurities can be produced at lower cost, in larger amounts, and in safety, characterized by 10 subjecting a solution containing tetravalent titanium ions and having a pH of not more than 7 to cathode electrolytic treatment to reduce parts of the tetravalent titanium ions to trivalent titanium ions, to prepare a reducing agent 15 solution containing both the trivalent titanium ions and the tetravalent titanium ions, and adding a water-soluble compound of at least one type of metal element forming the fine metal powder to the reducing agent solution, followed by mixing, to 20 reduce and deposit ions of the metal element by the reducing action at the time of oxidation of the trivalent titanium ions to the tetravalent titanium ions, to produce the fine metal powder.